## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 23 June 2005 (23.06.2005)

**PCT** 

## (10) International Publication Number WO 2005/056284 A2

(51) International Patent Classification7:

**B32B** 

(21) International Application Number:

PCT/US2004/041434

(22) International Filing Date: 8 December 2004 (08.12.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/527,898

8 December 2003 (08.12.2003) US

- (71) Applicant: TREDEGAR FILM PRODUCTS CORPO-RATION [US/US]; 1100 Boulders Parkway, Richmond, VA 23225 (US).
- (72) Inventors: CREE, James, W.; 13309 Sandy Shore Mews, Chesterfield, VA 23838 (US). MILLIKAN, Toni, Rae; 5347 Chisholm Ct., Apt. G, Terre Haute, IN 47808 (US).
- (74) Agent: TESSARI, Joseph, A.; Tredegar Film Products Corporation, 1100 Boulders Parkway, Richmond, VA 23225 (US).

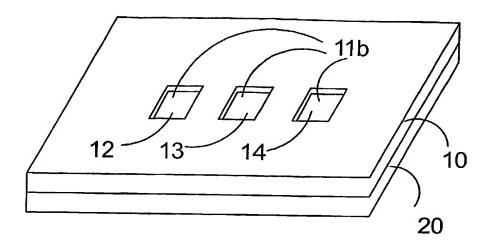
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## **Published:**

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DIFFERENTIAL ENERGY COMPOSITES AND METHODS OF MANUFACTURING SAME



(57) Abstract: Methods and articles are taught comprising differential energy composites. The composite is a unified structure comprising layers with differing surface energies. A differential between the surface energies exists and access may be provided through one layer to another layer, so that liquids maybe drawn into the composite.